

Decomposition A/M

i) $x^2 + 7x + 12$

ii) $2x^2 - 10x + 8$

iii) $3s^2 + 8st + 4t^2$

Sep 26-8:10 AM

Decomposition A/M

i) $x^2 + 7x + 12$
 $x^2 + 3x + 4x + 12$
 $x(x+3) + 4(x+3)$
 $(x+3)(x+4)$

ii) $3s^2 + 8st + 4t^2$
 $3s^2 + 6st + 2st + 4t^2$
 $3s(s+2t) + 2t(s+2t)$
 $(s+2t)(3s+2t)$

$2x^2 - 10x + 8$
 $2(x^2 - 5x + 4)$
 $2(x^2 - 4x - 1x + 4)$
 $2(x(x-4) - 1(x-4))$
 $2(x-4)(x-1)$

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STEPS Decomposition -Factoring

i) Common Factor
 Special Cases

ii) Difference of Squares

iii) Perfect Squares

iv) Decomposition b/a/c

v) Determine Non Factorable -bad formula

$2x^2 - 7x - 4$
 $2x^2 + 2x - 9x - 4$
 $x(2x+1) - 4(2x+1)$
 $(2x+1)(x-4)$

$3x^2 + 18x + 15$
 $3(x^2 + 6x + 5)$
 $3(x^2 + 5x + x + 5)$
 $3[x(x+5) + 1(x+5)]$
 $3(x+1)(x+5)$

Sep 27-9:47 AM

Factoring Special Cases

Difference of Squares

Check
 c term - negative
 no middle term
 square roots a & c
 (perfect)

$(x^2 - 49)$
 $(x^2 - 7^2)$
 $(x+7)(x-7)$

Feb 25-10:58 AM

$(x^2 - 81)$ $(x^2 - 121)$
 $(x-9)(x+9)$ $(x+11)(x-11)$

$(x^2 + 225)$ $(9x^2 - 16)$
 nonfactorable $(3x-4)(3x+4)$

Feb 25-11:01 AM

Perfect Squares

$ax^2 + bx + c$
 $x^2 + 14x + 49$
 $(x+7)(x+7)$
 $(x+7)^2$

$\sqrt{\quad} \sqrt{\quad} x^2$
 = middle term
 = Perfect Square

Feb 25-11:06 AM

$$x^2 + \underline{16x} + 64 \quad x(0)(2) = 16x$$

$$(x + 8)^2$$

$$x^2 - 20x + 100 \quad (x)(10)(2)$$

$$(x - 10)^2$$

Feb 25-11:09 AM

$$9m^2 + 42m + 49$$

$$(3m + 7)^2 \quad (3m)(7)(2)$$

Homework

q 4-10, 13 * p 110

q 2-4 p 115

q 3, 4, 13, 18 p. 120

Feb 25-11:12 AM

$$x^2 + \underline{52x} + 100 \quad \sqrt{x^2} \quad \sqrt{100}$$

$$x^2 + 50x + 2x + 100 \quad x \quad 10 \quad (2)$$

$$x(x + 50) + 2(x + 50) = 20x$$

$$(x + 50)(x + 2)$$

A	M
+52	+100
2	50

Sep 24-10:30 AM

$$h(t) = 45 - 5t^2$$

$$0 \leq t \leq 3 \quad a)$$

$$0 = 45 - 5t^2$$

$$-45 = -5t^2$$

$$\frac{-45}{-5} = \frac{-5t^2}{-5}$$

$$9 = t^2$$

$$\sqrt{9} = t$$

$$3 = t$$

Feb 25-11:14 AM

Sep 22-10:52 AM